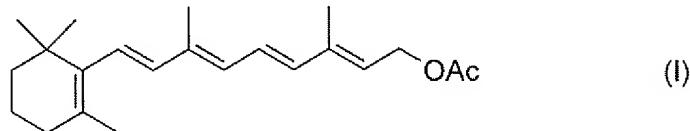


**AMENDMENTS TO THE CLAIMS**

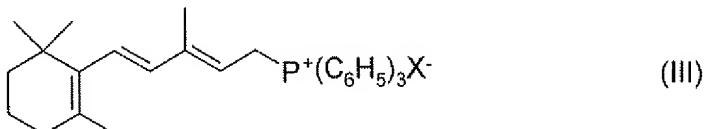
1. (Currently amended) A process for preparing vitamin A acetate of the formula (I)



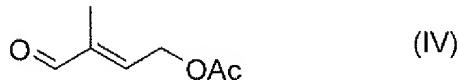
by reacting which comprises reacting  $\beta$ -vinylionol of the formula (II)



with triphenylphosphine in the presence of sulfuric acid to give the C15 salt of the formula (III)



where  $X^-$  is  $\text{HSO}_4^-$  and/or  $\text{CH}_3\text{SO}_4^-$ , and subsequent Wittig reaction with C5 acetate of the formula (IV)



in water as solvent and in the presence of a base, wherein the synthesis of C15 salt of the formula III starts from  $\beta$ -vinylionol in a solvent mixture consisting of

- 60 to 80% by weight methanol,
- 10 to 20% by weight water and

- 10 to 20% by weight aliphatic, cyclic or aromatic hydrocarbons having 5 to 8 carbon atoms,

where the % by weight data chosen within the stated ranges must add up to 100% by weight.

2. (Currently amended) The process according to claim 1, wherein the Wittig reaction is carried out at a temperature of from 45 to 55°C and wherein said base is ammonia and said ammonia is present in an amount in the presence of, based on the C15 salt employed, from 2 to 2.3 equivalents based on the amount of C15 salt reacted of ammonia as base.

3. (Previously presented) The process according to claim 1, wherein the synthesis of C15 salt of the formula III is carried out at a temperature of from 45 to 55°C.

4. (Previously presented) The process according to claim 1, wherein the synthesis of C15 salt of the formula III is carried out in the presence of sulfuric acid with a concentration of from 70 to 80% by weight.

5. (Currently amended) The process according to claim 1, wherein

a. the synthesis of C15 salt of the formula III is carried out at a temperature of from 48 to 52°C in a solvent mixture consisting of

- 64 to 72% by weight methanol,
- 14 to 18% by weight water and
- 14 to 18% by weight heptane which may comprise up to 40% by weight of further hydrocarbons, and

b. the Wittig reaction is carried out at a temperature of from 48 to 52°C and wherein said base is ammonia and said ammonia is present in an amount in the presence of, based on the C15 salt employed, from 2.1 to 2.2 equivalents based on the amount of C15 salt reacted of ammonia as base.

6. (Previously presented) The process according to claim 1, wherein the synthesis of C15

salt of the formula III is carried out in the presence of sulfuric acid with a concentration of from 73 to 77% by weight.

7. (Currently amended) The process according to claim 1, wherein the Wittig reaction is carried out by employing C15 salt of the formula III in the form of a mixture consisting of the hydrogen sulfate (X = HSO<sub>4</sub>) and the methyl sulfate (X = CH<sub>3</sub>SO<sub>4</sub>), where the proportion of methyl sulfate is from 0.1 to 15 mole %.

8. (Currently amended) The process according to claim 1, wherein the proportion of methyl sulfate is from 0.1 to 5 mole %.

9. (Currently amended) The process according to claim 1, wherein said base is ammonia is employed in the Wittig reaction in the form of an aqueous solution with a concentration of from 5 to 20% by weight.

10. (Previously presented) The process according to claim 1, which is carried out semicontinuously or entirely continuously.

11. (Previously presented) The process according to claim 1, wherein the solvent mixture employed to synthesize the C15 salt is, optionally after restoration of the desired composition by adding at least one of the solvent components, returned to the process.

12. (Previously presented) The process according to claim 5, wherein the solvent mixture consisting of

- about 66.5% by weight methanol,
- about 16.5% by weight water and
- about 17% by weight heptane.

13. (Previously presented) The process according to claim 1, wherein triphenylphosphine has a purity of about 95 to about 99.9% and the amount of triphenylphosphine employed is, based on

$\beta$ -vinylol, approximately equimolar.

14. (Previously presented) The process according to claim 1, wherein the  $\beta$ -vinylol is present in about 16 to about 24% by weight and the triphenylphosphine is present about 18 to about 26% by weight.

15. (Previously presented) The process according to claim 1, wherein the  $\beta$ -vinylol is present from about 18 to about 22% by weight and the triphenylphosphine is present from about 20 to about 24% by weight.

16. (New) The process according to claim 1, wherein the catalyst consist of

60 to 80% by weight methanol,

10 to 20% by weight water and

10 to 20% by weight alkanes having 5 to 8 carbon atoms.